

**Table 155. Energy Consumption Estimates by Source, Selected Years 1960-1997, Minnesota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>d</sup>	Biomass <sup>e</sup>	Other <sup>a,f</sup>	Net Inter-state Flow of Electricity/Losses <sup>g</sup>	Total <sup>h</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,c</sup>	Total					Million kWh	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh				Million kWh	
1960	5,977	180	3,004	1,199	16,151	472	2,570	4,525	960	32,583	6,658	1,334	69,455	0	977	-	-	-3,263	-
1965	7,260	249	3,791	803	18,960	2,624	2,313	5,781	759	35,278	4,980	2,334	77,622	143	1,204	-	-	-1,370	-
1970	8,787	342	4,413	277	22,356	3,491	1,685	8,887	924	44,122	5,159	3,159	94,472	0	1,020	-	-	-11,382	-
1975	10,120	331	4,628	215	24,369	5,629	856	9,187	1,003	48,253	4,326	4,111	102,577	9,750	1,101	-	-	6,217	-
1980	13,810	286	3,565	193	21,382	5,142	212	7,697	1,120	46,211	3,183	3,756	92,460	10,027	1,739	-	-	8,135	-
1985	12,744	257	4,989	154	19,399	7,781	184	5,353	1,019	45,285	859	3,017	88,040	11,572	3,642	-	-	22,856	-
1986	11,327	245	5,480	225	18,886	7,801	124	6,280	996	45,776	1,797	3,061	90,427	11,052	7,941	-	-	16,359	-
1987	14,504	240	5,860	178	18,265	5,656	91	5,418	1,126	47,018	1,208	3,487	88,306	11,554	2,806	-	-	21,498	-
1988	17,285	284	4,897	166	19,910	5,142	153	5,621	1,086	48,813	1,277	4,551	91,617	12,288	-992	-	-	28,054	-
1989	18,279	300	4,923	158	19,194	4,663	324	6,088	1,114	48,576	1,071	5,194	91,305	10,926	NA	-	-	R 23,037	-
1990	18,377	291	6,039	214	18,481	5,099	42	5,966	1,146	47,760	974	5,510	91,231	12,139	NA	-	-	R 18,727	-
1991	16,993	314	5,040	188	21,227	4,978	54	6,595	1,026	48,578	1,053	6,001	94,739	12,059	NA	-	-	R 20,039	-
1992	16,924	309	5,343	134	21,630	6,621	53	8,008	1,046	49,693	1,189	6,982	100,699	11,166	NA	-	-	9,743	-
1993	18,321	328	4,793	132	21,073	9,438	60	8,926	1,065	51,348	1,251	6,877	104,963	11,986	NA	-	-	2,066	-
1994	18,729	324	4,745	125	23,698	9,780	134	9,445	1,113	52,540	1,102	7,384	110,067	12,224	NA	-	-	R 2,747	-
1995	18,947	353	6,403	129	24,574	9,969	104	9,758	1,094	54,303	657	6,908	113,899	13,243	NA	-	-	13,265	-
1996	19,264	368	6,674	124	24,575	10,625	123	10,932	1,061	54,866	796	8,507	118,284	12,095	NA	-	-	R 2,667	-
1997	19,086	354	6,671	137	24,810	10,887	102	11,043	1,121	55,755	710	8,708	119,943	10,819	NA	-	-	-3,141	-

  

Trillion Btu																			
1960	131.3	186.1	19.9	6.1	94.1	2.6	14.6	18.1	5.8	171.2	41.9	8.0	382.2	0.0	10.5	R 25.4	0.0	-11.1	R 724.4
1965	160.0	248.2	25.2	4.1	110.4	14.8	13.1	23.2	4.6	185.3	31.3	13.8	425.8	1.7	12.6	R 23.4	0.0	-4.7	R 867.0
1970	179.7	343.0	29.3	1.4	130.2	19.7	9.6	33.6	5.6	231.8	32.4	18.8	512.4	0.0	10.7	R 23.4	0.0	38.8	R 1,108.1
1975	191.5	331.5	30.7	1.1	141.9	31.9	4.9	34.1	6.1	253.5	27.2	24.4	555.8	107.4	11.5	R 27.4	0.0	21.2	R 1,246.2
1980	242.4	285.0	23.7	1.0	124.5	29.1	1.2	28.3	6.8	242.7	20.0	22.4	499.7	109.4	18.1	R 56.6	0.0	27.8	R 1,238.9
1985	226.1	258.5	33.1	0.8	113.0	44.1	1.0	19.3	6.2	237.9	5.4	18.5	479.3	125.1	38.0	R 62.0	0.0	78.0	R 1,267.0
1986	201.4	244.5	36.4	1.1	110.0	44.2	0.7	22.9	6.0	240.5	11.3	19.0	492.0	119.4	83.0	R 68.1	0.0	55.8	R 1,264.2
1987	256.0	239.8	38.9	0.9	106.4	32.0	0.5	19.8	6.8	247.0	7.6	21.2	481.1	124.5	29.2	R 66.8	0.0	73.4	R 1,270.7
1988	303.6	285.8	32.5	0.8	116.0	29.1	0.9	20.5	6.6	256.4	8.0	27.5	498.3	132.0	-10.2	R 70.6	(s)	95.7	R 1,375.8
1989	323.0	301.7	32.7	0.8	111.8	26.4	1.8	22.4	6.8	255.2	6.7	31.1	495.7	117.2	R i 0.1	R i 75.4	R i 0.4	R 78.6	R i 1,388.0
1990	324.3	291.7	40.1	1.1	107.7	28.9	0.2	21.6	7.0	250.9	6.1	33.0	496.5	129.6	27.8	R 79.5	R 0.4	63.9	R 1,386.2
1991	300.6	318.3	33.4	0.9	123.6	28.2	0.3	23.8	6.2	255.2	6.6	35.8	514.1	129.5	36.3	R 77.9	R 0.5	68.4	R 1,434.7
1992	300.1	312.2	35.5	0.7	126.0	37.5	0.3	29.0	6.3	261.0	7.5	41.3	545.1	119.2	62.8	R 83.1	R 0.5	33.2	R 1,446.2
1993	324.7	331.5	31.8	0.7	122.7	53.5	0.3	32.2	6.5	269.7	7.9	40.9	566.2	128.0	82.9	R 84.7	R 0.5	7.1	R 1,510.0
1994	332.1	327.4	31.5	0.6	138.0	55.4	0.8	34.3	6.7	276.0	6.9	43.8	594.2	130.5	60.1	R 85.5	R 0.9	9.4	R 1,552.9
1995	337.2	357.7	42.5	0.7	143.1	56.5	0.6	35.4	6.6	285.3	4.1	41.0	615.8	141.1	R 46.1	R 91.0	R 1.1	45.3	R 1,637.5
1996	345.5	375.1	44.3	0.6	143.1	60.2	0.7	39.5	6.4	288.2	5.0	50.4	638.6	128.5	92.9	R 89.0	R 1.1	9.1	R 1,692.9
1997	341.2	360.5	44.3	0.7	144.5	61.7	0.6	39.9	6.8	292.9	4.5	51.6	647.5	114.9	95.4	92.5	1.1	-10.7	1,685.8

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>e</sup> "Biomass" is wood, waste, and ethanol. Ethanol blended into motor gasoline is included in motor gasoline and total petroleum. It is also included in the biomass series to give complete biomass data, but it is counted only once in the energy total.

<sup>f</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>g</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>h</sup> From 1989, "Total" does not equal the sum of the columns. Ethanol (which is shown in the transportation sector table) is included in both motor gasoline and biomass data in this table but only once in the total. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total in this table but not in any other columns.

<sup>i</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

kWh=kilowatt-hours. R=Revised data. - =Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 156. Residential Energy Consumption Estimates, Selected Years 1960-1997, Minnesota

Year	Coal			Natural Gas <sup>b</sup>	Petroleum				Wood	Geothermal	Solar <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total
	Bituminous Coal and Lignite <sup>a</sup>	Anthracite <sup>a</sup>	Total		Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Total						Million Kilowatthours	
	Thousand Short Tons				Billion Cubic Feet	Thousand Barrels						Thousand Cords	Kilowatthours	Energy	
1960	330	0	330	61	5,414	1,748	3,108	10,270	R 878	-	-	4,186	-	10,411	-
1965	216	0	216	86	6,309	1,556	4,043	11,908	R 682	-	-	6,063	-	14,476	-
1970	200	0	200	102	7,197	1,195	6,390	14,782	R 560	-	-	9,031	-	21,886	-
1975	81	0	81	114	7,242	558	6,040	13,840	R 563	-	-	10,189	-	24,578	-
1980	50	0	50	103	5,946	114	2,929	8,989	R 892	-	-	11,749	-	28,570	-
1985	77	0	77	107	3,826	137	2,400	6,363	R 855	-	-	13,261	-	31,156	-
1986	68	0	68	103	3,998	88	2,796	6,881	R 833	-	-	13,259	-	30,500	-
1987	60	0	60	90	3,887	75	2,704	6,666	R 755	-	-	13,834	-	31,609	-
1988	82	(s)	82	110	4,376	115	2,844	7,334	R 784	-	-	14,996	-	33,903	-
1989	88	(s)	88	117	4,495	270	3,124	7,888	R 813	-	-	14,778	-	R 33,202	-
1990	63	0	63	107	3,222	30	2,933	6,185	562	-	-	14,858	-	R 32,497	-
1991	33	(s)	33	117	4,098	41	3,186	7,324	592	-	-	15,655	-	R 34,079	-
1992	9	(s)	9	114	3,426	38	3,560	7,024	623	-	-	14,848	-	R 31,715	-
1993	37	(s)	38	123	3,210	36	4,379	7,624	R 522	-	-	15,597	-	32,953	-
1994	80	(s)	80	122	3,384	45	4,305	7,735	R 512	-	-	16,007	-	R 33,401	-
1995	92	0	92	129	3,334	50	4,447	7,831	R 568	-	-	16,974	-	R 35,363	-
1996	55	0	55	142	3,499	61	5,292	8,852	R 567	-	-	17,157	-	R 35,708	-
1997	37	(s)	37	129	3,106	52	5,292	8,450	413	-	-	17,073	-	35,457	-

## Trillion Btu

1960	7.3	0.0	7.3	63.6	31.5	9.9	12.5	53.9	R 17.6	0.0	0.0	14.3	R 156.6	35.5	R 192.1
1965	4.7	0.0	4.7	86.3	36.7	8.8	16.2	61.8	R 13.6	0.0	0.0	20.7	R 187.1	49.4	R 236.5
1970	4.2	0.0	4.2	102.0	41.9	6.8	24.1	72.8	R 11.2	0.0	0.0	30.8	R 221.1	74.7	R 295.7
1975	1.6	0.0	1.6	114.7	42.2	3.2	22.4	67.8	R 11.3	0.0	0.0	34.8	R 230.1	83.9	R 313.9
1980	1.0	0.0	1.0	103.1	34.6	0.6	10.8	46.0	R 17.8	0.0	0.0	40.1	R 208.1	97.5	R 305.6
1985	1.5	0.0	1.5	107.1	22.3	0.8	8.6	31.7	R 17.1	0.0	0.0	45.2	R 202.6	106.3	R 308.9
1986	1.3	0.0	1.3	103.2	23.3	0.5	10.2	34.0	R 16.7	0.0	0.0	45.2	R 200.3	104.1	R 304.4
1987	1.1	0.0	1.1	89.9	22.6	0.4	9.9	33.0	R 15.1	0.0	0.0	47.2	R 186.2	107.8	R 294.0
1988	1.5	(s)	1.5	110.4	25.5	0.7	10.4	36.5	R 15.7	0.0	0.0	51.2	R 215.3	115.7	R 331.0
1989	1.7	(s)	1.7	117.6	26.2	1.5	11.5	39.2	R 16.3	e 0.1	R e 0.3	50.4	R e 225.6	113.3	R e 338.9
1990	1.1	0.0	1.1	107.4	18.8	0.2	10.6	29.6	11.2	0.1	0.3	50.7	R 200.5	110.9	R 311.3
1991	0.6	(s)	0.6	118.6	23.9	0.2	11.5	35.6	11.8	0.2	0.3	53.4	R 220.5	116.3	R 336.8
1992	0.2	(s)	0.2	114.8	20.0	0.2	12.9	33.1	12.5	0.2	0.3	50.7	R 211.6	108.2	R 319.9
1993	0.7	(s)	0.7	124.8	18.7	0.2	15.8	34.7	R 10.4	0.2	0.3	53.2	R 224.3	112.4	R 336.7
1994	1.6	(s)	1.6	123.6	19.7	0.3	15.6	35.6	R 10.2	0.2	0.3	54.6	R 226.1	114.0	R 340.1
1995	1.9	0.0	1.9	130.4	19.4	0.3	16.1	35.8	11.4	0.2	0.3	57.9	R 237.9	R 120.7	R 358.6
1996	1.0	0.0	1.0	144.9	20.4	0.3	19.1	39.8	R 11.3	0.2	0.3	58.5	R 256.1	121.8	R 378.0
1997	0.7	(s)	0.7	131.2	18.1	0.3	19.1	37.5	8.3	0.2	0.4	58.3	236.5	121.0	357.5

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Includes small amounts of solar energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

non-electric utility use of renewable energy beginning in 1989.

R=Revised data.

- =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 157. Commercial Energy Consumption Estimates, Selected Years 1960-1997, Minnesota**

Year	Coal			Natural Gas <sup>b</sup>	Petroleum						Wood	Geothermal	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>c</sup>	Total <sup>d</sup>		
	Bituminous Coal and Lignite <sup>a</sup>	Anthracite <sup>a</sup>	Total		Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total							Thousand Cords	Million Kilowatthours
	Thousand Short Tons				Thousand Barrels										Thousand Cords			
1960	614	0	614	20	1,323	378	548	142	634	3,026	R 17	-	1,540	-	3,831	-		
1965	401	0	401	27	1,542	337	713	158	414	3,164	R 13	-	2,026	-	4,838	-		
1970	372	0	372	77	1,759	259	1,128	235	393	3,774	R 11	-	3,178	-	7,701	-		
1975	151	0	151	90	1,770	121	1,066	355	223	3,536	R 11	-	4,845	-	11,686	-		
1980	93	0	93	64	1,443	0	517	340	32	2,331	R 21	-	5,724	-	13,919	-		
1985	143	0	143	77	2,740	24	424	335	223	3,746	NA	-	7,469	-	17,548	-		
1986	126	0	126	74	1,077	4	493	327	307	2,209	NA	-	7,625	-	17,540	-		
1987	111	0	111	66	1,008	5	477	240	129	1,860	NA	-	8,031	-	18,350	-		
1988	152	(s)	152	80	1,102	5	502	242	296	2,147	NA	-	8,601	-	19,444	-		
1989	163	(s)	163	85	1,033	4	551	191	268	2,048	NA	-	8,454	-	R 18,996	-		
1990	116	0	116	78	939	5	518	1,568	263	3,293	NA	-	8,813	-	R 19,275	-		
1991	61	(s)	61	86	910	3	562	198	295	1,969	NA	-	9,162	-	R 19,944	-		
1992	16	(s)	16	82	760	7	628	117	197	1,709	NA	-	9,007	-	R 19,240	-		
1993	70	(s)	70	87	653	9	773	49	134	1,618	R 42	-	9,229	-	19,500	-		
1994	148	(s)	149	84	903	14	760	49	161	1,887	R 43	-	9,698	-	R 20,236	-		
1995	171	0	171	91	931	23	785	50	113	1,903	R 43	-	10,407	-	R 21,682	-		
1996	101	0	101	99	1,028	27	934	50	141	2,179	R 47	-	10,850	-	R 22,581	-		
1997	68	(s)	68	92	925	26	934	1,010	163	3,058	40	-	10,888	-	22,611	-		
<b>Trillion Btu</b>																		
1960	13.5	0.0	13.5	21.0	7.7	2.1	2.2	0.7	4.0	16.8	R 0.3	0.0	5.3	R 56.9	13.1	R 70.0		
1965	8.8	0.0	8.8	26.8	9.0	1.9	2.9	0.8	2.6	17.2	R 0.3	0.0	6.9	R 59.9	16.5	R 76.5		
1970	7.8	0.0	7.8	76.7	10.2	1.5	4.3	1.2	2.5	19.7	R 0.2	0.0	10.8	R 115.3	26.3	R 141.6		
1975	2.9	0.0	2.9	89.9	10.3	0.7	4.0	1.9	1.4	18.2	R 0.2	0.0	16.5	R 127.7	39.9	R 167.6		
1980	1.9	0.0	1.9	63.6	8.4	0.0	1.9	1.8	0.2	12.3	R 0.4	0.0	19.5	R 97.8	47.5	R 145.3		
1985	2.7	0.0	2.7	77.3	16.0	0.1	1.5	1.8	1.4	20.8	NA	0.0	25.5	126.3	59.9	186.2		
1986	2.4	0.0	2.4	74.4	6.3	(s)	1.8	1.7	1.9	11.7	NA	0.0	26.0	114.5	59.8	174.4		
1987	2.0	0.0	2.0	65.9	5.9	(s)	1.7	1.3	0.8	9.7	NA	0.0	27.4	105.0	62.6	167.6		
1988	2.8	(s)	2.8	80.6	6.4	(s)	1.8	1.3	1.9	11.4	NA	0.0	29.3	124.1	66.3	190.4		
1989	3.1	(s)	3.1	85.7	6.0	(s)	2.0	1.0	1.7	10.8	NA	0.0	28.8	128.5	64.8	R 193.3		
1990	2.1	0.0	2.1	78.3	5.5	(s)	1.9	8.2	1.7	17.3	NA	0.0	30.1	127.7	65.8	193.5		
1991	1.1	(s)	1.1	86.9	5.3	(s)	2.0	1.0	1.9	10.2	NA	0.0	31.3	129.5	68.0	R 197.6		
1992	0.3	(s)	0.3	83.3	4.4	(s)	2.3	0.6	1.2	8.6	NA	0.0	30.7	122.9	65.6	R 188.6		
1993	1.3	(s)	1.3	87.6	3.8	(s)	2.8	0.3	0.8	7.7	R 0.8	0.0	31.5	R 128.9	66.5	R 195.5		
1994	2.9	(s)	2.9	84.9	5.3	0.1	2.8	0.3	1.0	9.4	R 0.9	0.0	33.1	R 131.1	69.0	R 200.1		
1995	3.5	0.0	3.5	91.9	5.4	0.1	2.8	0.3	0.7	9.4	R 0.9	0.0	35.5	R 141.1	74.0	R 215.0		
1996	1.8	0.0	1.8	100.3	6.0	0.2	3.4	0.3	0.9	10.7	R 0.9	0.0	37.0	R 150.7	R 77.0	R 227.8		
1997	1.3	(s)	1.3	93.9	5.4	0.1	3.4	5.3	1.0	15.2	0.8	0.0	37.1	148.4	77.2	225.5		

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>d</sup> Small amounts of solar energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

R=Revised data.

- =Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 158. Industrial Energy Consumption Estimates, Selected Years 1960-1997, Minnesota

Year	Coal Thousand Short Tons	Natural Gas <sup>a</sup> Billion Cubic Feet	Petroleum									Hydro-electric Power <sup>b</sup> Million kWh	Wood and Waste	Other <sup>b,d</sup>	Electricity <sup>b</sup>		Electrical System Energy Losses <sup>e</sup> Million kWh	Total
			Asphalt and Road Oil <sup>b</sup>	Distillate Fuel <sup>b</sup>	Kero-sene <sup>b</sup>	LPG <sup>b</sup>	Lubri-cants <sup>b</sup>	Motor Gasoline	Residual Fuel <sup>b</sup>	Other <sup>b,c</sup>	Total				Million kWh	Net Energy		
			Thousand Barrels															
1960	2,555	49	3,004	6,062	444	841	263	4,266	5,690	1,334	21,904	156	-	-	3,095	-	7,699	-
1965	2,776	83	3,791	7,651	420	988	163	3,947	4,213	2,334	23,507	178	-	-	4,677	-	11,166	-
1970	2,020	98	4,413	7,784	231	1,275	296	3,608	3,894	3,016	24,517	168	-	-	8,506	-	20,613	-
1975	2,292	101	4,628	7,991	177	1,985	252	3,132	2,675	4,051	24,891	189	-	-	11,280	-	27,208	-
1980	1,057	101	3,565	5,708	98	4,183	324	1,336	1,818	3,756	20,789	145	-	-	15,525	-	37,752	-
1985	1,027	66	4,989	4,802	23	2,406	294	1,718	481	3,017	17,730	145	-	-	17,934	-	42,133	-
1986	964	58	5,480	5,664	31	2,865	288	1,590	1,456	3,061	20,436	145	-	-	17,849	-	41,058	-
1987	838	72	5,860	4,746	11	2,165	326	1,509	1,075	3,487	19,177	145	-	-	19,911	-	45,495	-
1988	792	78	4,897	5,287	34	2,202	314	1,272	968	4,387	19,360	145	-	-	22,131	-	50,033	-
1989	972	81	4,923	4,637	50	2,351	322	1,253	793	4,515	18,844	NA	-	-	22,700	-	51,002	-
1990	1,283	88	6,039	4,719	7	2,459	331	1,117	710	4,782	20,165	NA	-	-	23,497	-	51,393	-
1991	785	92	5,040	5,612	10	2,795	296	1,442	753	5,039	20,988	NA	-	-	23,938	-	52,110	-
1992	1,059	93	5,343	6,193	8	3,765	302	1,417	989	5,918	23,934	NA	-	-	23,557	-	50,317	-
1993	1,370	98	4,793	5,765	16	3,674	308	1,222	1,115	5,800	22,693	NA	-	-	24,384	-	51,519	-
1994	1,455	94	4,745	6,414	75	4,254	322	1,254	938	6,391	24,393	NA	-	-	25,451	-	53,109	-
1995	1,401	106	6,403	6,518	31	4,392	316	1,192	544	6,138	25,534	NA	-	-	26,577	-	55,368	-
1996	1,649	102	6,674	6,600	35	4,575	307	670	654	7,453	26,968	NA	-	-	26,934	-	56,056	-
1997	1,490	107	6,671	6,784	25	4,697	324	1,846	530	7,466	28,343	NA	-	-	27,713	-	57,553	-

  

Trillion Btu																		
1960	55.2	51.0	19.9	35.3	2.5	3.4	1.6	22.4	35.8	8.0	128.9	1.7	R 7.4	0.0	10.6	R 254.7	26.3	R 281.0
1965	60.8	82.6	25.2	44.6	2.4	4.0	1.0	20.7	26.5	13.8	138.1	1.9	R 9.3	0.0	16.0	R 308.7	38.1	R 346.8
1970	42.1	97.8	29.3	45.3	1.3	4.8	1.8	19.0	24.5	18.0	143.9	1.8	R 11.8	0.0	29.0	R 326.4	70.3	R 396.7
1975	50.8	100.8	30.7	46.5	1.0	7.4	1.5	16.5	16.8	24.1	144.5	2.0	R 15.9	0.0	38.5	R 352.4	92.8	R 445.2
1980	18.1	101.2	23.7	33.3	0.6	15.4	2.0	7.0	11.4	22.4	115.6	1.5	R 38.3	0.0	53.0	R 327.6	128.8	R 456.4
1985	21.3	66.6	33.1	28.0	0.1	8.7	1.8	9.0	3.0	18.5	102.3	1.5	R 44.8	0.0	61.2	R 297.6	143.8	R 441.4
1986	20.2	57.8	36.4	33.0	0.2	10.4	1.7	8.4	9.2	19.0	118.2	1.5	R 51.5	0.0	60.9	R 310.1	140.1	R 450.2
1987	17.0	71.9	38.9	27.6	0.1	7.9	2.0	7.9	6.8	21.2	112.3	1.5	R 51.2	0.0	67.9	R 321.9	155.2	R 477.1
1988	15.2	78.3	32.5	30.8	0.2	8.0	1.9	6.7	6.1	26.5	112.7	1.5	R 53.3	0.0	75.5	R 336.4	170.7	R 507.1
1989	19.0	82.0	32.7	27.0	0.3	8.7	2.0	6.6	5.0	27.0	109.2	R f 2.1	R f 48.2	f 0.0	77.5	R f 337.9	174.0	R f 512.0
1990	23.8	88.7	40.1	27.5	(s)	8.9	2.0	5.9	4.5	28.6	117.5	2.1	R 54.4	0.0	80.2	R 366.7	R 175.4	R 542.1
1991	15.2	93.4	33.4	32.7	0.1	10.1	1.8	7.6	4.7	30.0	120.4	2.7	R 54.2	0.0	81.7	R 367.5	177.8	R 545.3
1992	19.6	94.1	35.5	36.1	(s)	13.6	1.8	7.4	6.2	34.9	135.6	3.2	R 57.2	0.0	80.4	R 390.0	171.7	R 561.7
1993	24.9	98.9	31.8	33.6	0.1	13.2	1.9	6.4	7.0	34.4	128.4	3.3	R 58.7	0.0	83.2	R 397.4	175.8	R 573.1
1994	26.9	95.5	31.5	37.4	0.4	15.5	2.0	6.6	5.9	37.9	137.0	3.2	R 58.4	0.4	86.8	R 408.3	181.2	R 589.5
1995	26.7	107.6	42.5	38.0	0.2	15.9	1.9	6.3	3.4	36.4	144.5	2.9	R 61.9	0.6	90.7	R 434.9	188.9	R 623.8
1996	31.6	104.3	44.3	38.4	0.2	16.5	1.9	3.5	4.1	44.1	153.0	R 3.7	R 62.8	0.5	91.9	R 447.8	191.3	R 639.1
1997	28.1	109.3	44.3	39.5	0.1	17.0	2.0	9.7	3.3	44.1	160.1	3.5	64.3	0.6	94.6	460.4	196.4	656.8

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."

<sup>d</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

R=Revised data.

kWh=kilowatthours. --=Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

**Table 159. Transportation Energy Consumption Estimates, Selected Years 1960-1997, Minnesota**

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>c</sup>	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>d</sup>	Total <sup>c</sup>
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total				Million Kilowatthours	
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Gallons	Million Kilowatthours	Net Energy	Million Kilowatthours	Total <sup>c</sup>
1960	45	(s)	1,199	3,194	472	27	697	28,176	95	33,860	0	0	—	0	—
1965	9	1	803	3,276	2,624	37	596	31,173	75	38,584	0	0	—	0	—
1970	3	7	277	5,064	3,491	95	628	40,279	29	49,863	0	0	—	0	—
1975	(s)	4	215	6,691	5,629	97	752	44,766	577	58,726	0	0	—	0	—
1980	0	9	193	8,117	5,142	68	796	44,535	971	59,822	0	0	—	0	—
1985	0	6	154	7,982	7,781	123	724	43,232	155	60,152	0	0	—	0	—
1986	0	7	225	8,087	7,801	126	708	43,859	34	60,841	0	0	—	0	—
1987	0	6	178	8,522	5,656	72	801	45,270	4	60,502	0	0	—	0	—
1988	0	11	166	9,015	5,142	74	772	47,299	7	62,475	0	0	—	0	—
1989	0	12	158	8,949	4,663	62	792	47,132	2	61,757	R <sup>e</sup> 109,339	0	—	0	—
1990	0	12	214	9,509	5,099	57	815	45,075	0	60,768	126,279	0	—	0	—
1991	0	13	188	10,518	4,978	52	729	46,937	3	63,404	100,099	0	—	0	—
1992	0	15	134	11,190	6,621	54	743	48,159	3	66,904	121,659	0	—	0	—
1993	0	16	132	11,355	9,438	100	757	50,077	(s)	71,859	135,768	0	—	0	—
1994	0	17	125	12,889	9,780	126	791	51,237	2	74,951	153,941	0	—	0	—
1995	0	19	129	13,657	9,969	134	778	53,061	0	77,728	163,306	0	—	0	—
1996	0	20	124	13,308	10,625	132	755	54,146	0	79,090	124,660	0	—	0	—
1997	0	20	137	13,816	10,887	120	797	52,898	10	78,665	192,731	0	—	0	—
<b>Trillion Btu</b>															
1960	0.9	0.3	6.1	18.6	2.6	0.1	4.2	148.0	0.6	180.2	0.0	0.0	181.4	0.0	181.4
1965	0.2	1.2	4.1	19.1	14.8	0.1	3.6	163.8	0.5	205.9	0.0	0.0	207.3	0.0	207.3
1970	0.1	7.5	1.4	29.5	19.7	0.4	3.8	211.6	0.2	266.6	0.0	0.0	274.1	0.0	274.1
1975	(s)	3.9	1.1	39.0	31.9	0.4	4.6	235.2	3.6	315.6	0.0	0.0	319.5	0.0	319.5
1980	0.0	9.1	1.0	47.3	29.1	0.2	4.8	233.9	6.1	322.5	0.0	0.0	331.6	0.0	331.6
1985	0.0	6.3	0.8	46.5	44.1	0.4	4.4	227.1	1.0	324.2	0.0	0.0	330.5	0.0	330.5
1986	0.0	7.4	1.1	47.1	44.2	0.5	4.3	230.4	0.2	327.8	0.0	0.0	335.2	0.0	335.2
1987	0.0	6.5	0.9	49.6	32.0	0.3	4.9	237.8	(s)	325.5	0.0	0.0	332.0	0.0	332.0
1988	0.0	11.3	0.8	52.5	29.1	0.3	4.7	248.5	(s)	335.9	0.0	0.0	347.2	0.0	347.2
1989	0.0	12.0	0.8	52.1	26.4	0.2	4.8	247.6	(s)	331.9	R <sup>e</sup> 8.4	0.0	E <sup>e</sup> 343.9	0.0	E <sup>e</sup> 343.9
1990	0.0	12.1	1.1	55.4	28.9	0.2	4.9	236.8	0.0	327.3	9.6	0.0	339.3	0.0	339.3
1991	0.0	13.5	0.9	61.3	28.2	0.2	4.4	246.6	(s)	341.6	7.6	0.0	355.1	0.0	355.1
1992	0.0	15.1	0.7	65.2	37.5	0.2	4.5	253.0	(s)	361.0	9.3	0.0	376.2	0.0	376.2
1993	0.0	16.4	0.7	66.1	53.5	0.4	4.6	263.1	(s)	388.3	10.4	0.0	404.7	0.0	404.7
1994	0.0	17.5	0.6	75.1	55.4	0.5	4.8	269.1	(s)	405.5	11.8	0.0	423.1	0.0	423.1
1995	0.0	19.5	0.7	79.6	56.5	0.5	4.7	278.7	0.0	420.7	12.5	0.0	440.1	0.0	440.1
1996	0.0	20.2	0.6	77.5	60.2	0.5	4.6	284.4	0.0	427.9	9.5	0.0	448.0	0.0	448.0
1997	0.0	19.9	0.7	80.5	61.7	0.4	4.8	277.9	0.1	426.1	14.7	0.0	446.0	0.0	446.0

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

R=Revised data.

— =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 160. Estimates of Energy Input at Electric Utilities, Selected Years 1960-1997, Minnesota

Year	Coal			Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
	Bituminous Coal and Lignite	Anthracite	Total		Heavy Oil <sup>b,c</sup>	Light Oil <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons				Thousand Barrels									
1960	2,433	0	2,433	49	239	156	0	395	0	822	15	0	0	-
1965	3,857	0	3,857	51	278	182	0	460	143	1,026	14	0	0	-
1970	6,192	0	6,192	59	842	551	143	1,537	0	853	19	0	0	-
1975	7,595	0	7,595	23	851	674	59	1,584	9,750	913	4	0	0	-
1980	12,610	0	12,610	8	361	167	0	529	10,027	1,594	2	0	0	-
1985	11,498	0	11,498	1	(s)	49	0	49	11,572	3,497	(s)	0	0	-
1986	10,170	0	10,170	2	0	60	0	60	11,052	7,796	0	0	0	-
1987	13,495	0	13,495	6	(s)	101	0	101	11,554	2,662	41	0	0	-
1988	16,259	0	16,259	5	6	131	164	301	12,288	-1,137	153	0	(s)	-
1989	17,056	0	17,056	4	9	81	678	768	10,926	<sup>R</sup> -193	247	0	(s)	-
1990	16,916	0	16,916	5	1	91	727	820	12,139	2,472	398	0	(s)	-
1991	16,114	0	16,114	6	2	90	962	1,054	12,059	3,219	402	0	(s)	-
1992	15,841	0	15,841	5	(s)	62	1,064	1,127	11,166	5,769	407	0	(s)	-
1993	16,844	0	16,844	4	1	90	1,077	1,168	11,986	7,723	414	0	(s)	-
1994	17,046	0	17,046	6	0	108	993	1,101	12,224	5,517	414	0	(s)	-
1995	17,282	0	17,282	8	0	133	770	903	13,243	4,190	429	0	(s)	-
1996	17,459	0	17,459	5	2	140	1,055	1,196	12,095	8,634	422	0	(s)	-
1997	17,490	0	17,490	6	7	179	1,241	1,427	10,819	8,915	429	0	0	-

  

Trillion Btu														
1960	54.5	0.0	54.5	50.2	1.5	0.9	0.0	2.4	0.0	8.8	0.2	0.0	0.0	116.1
1965	85.5	0.0	85.5	51.3	1.7	1.1	0.0	2.8	1.7	10.7	0.1	0.0	0.0	152.2
1970	125.5	0.0	125.5	59.1	5.3	3.2	0.9	9.4	0.0	8.9	0.2	0.0	0.0	203.1
1975	136.3	0.0	136.3	22.3	5.4	3.9	0.4	9.6	107.4	9.5	(s)	0.0	0.0	285.1
1980	221.4	0.0	221.4	8.0	2.3	1.0	0.0	3.2	109.4	16.6	(s)	0.0	0.0	358.6
1985	200.6	0.0	200.6	1.3	(s)	0.3	0.0	0.3	125.1	36.5	(s)	0.0	0.0	363.9
1986	177.5	0.0	177.5	1.7	0.0	0.3	0.0	0.3	119.4	81.4	0.0	0.0	0.0	380.3
1987	235.9	0.0	235.9	5.7	(s)	0.6	0.0	0.6	124.5	27.7	0.4	0.0	0.0	394.9
1988	284.2	0.0	284.2	5.2	(s)	0.8	1.0	1.8	132.0	-11.7	1.6	0.0	(s)	413.0
1989	299.1	0.0	299.1	4.4	0.1	0.5	4.1	4.6	117.2	<sup>R</sup> -2.0	2.6	0.0	(s)	430.2
1990	297.3	0.0	297.3	5.2	(s)	0.5	4.4	4.9	129.6	25.7	4.1	0.0	(s)	449.0
1991	283.7	0.0	283.7	5.9	(s)	0.5	5.8	6.3	129.5	33.6	4.2	0.0	(s)	460.1
1992	280.0	0.0	280.0	4.9	(s)	0.4	6.4	6.8	119.2	59.7	4.2	0.0	(s)	474.1
1993	297.9	0.0	297.9	3.9	(s)	0.5	6.5	7.0	128.0	79.6	4.3	0.0	(s)	515.6
1994	300.7	0.0	300.7	5.9	0.0	0.6	6.0	6.6	130.5	56.9	4.3	0.0	(s)	<sup>R</sup> 529.4
1995	305.1	0.0	305.1	8.3	0.0	0.8	4.6	5.4	141.1	43.2	4.4	0.0	(s)	522.4
1996	311.2	0.0	311.2	5.3	(s)	0.8	6.4	7.2	128.5	<sup>R</sup> 89.2	4.4	0.0	(s)	568.5
1997	311.1	0.0	311.1	6.1	(s)	1.0	7.5	8.6	114.9	91.9	4.4	0.0	0.0	595.2

<sup>a</sup> Includes supplemental gaseous fuels.

<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.

<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.

<sup>e</sup> If applicable, through 1989, includes all net imports of electricity, and, from 1990, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.

<sup>g</sup> If applicable, from 1990, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

<sup>R</sup>=Revised data.

- =Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.